

REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1-3 and 5-9 are currently pending in this application. Claim 4 has been canceled without prejudice. Claims 1-3 and 7 have been amended. New claims 8 and 9 have been added to more distinctly claim subject matter which the Applicant regards as the invention. Applicant submits that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 USC §102

Claims 1 and 7 stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 4,048,563 to Osborne (hereafter "Osborne").

Claims 1 and 7 also stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,303,258 to Nakamura (hereafter "Nakamura").

Claims 1-5 and 7 also stand rejected under 35 USC §102(b) as being anticipated by U.S. Patent No. 5,911,119 to Bartholomew et al. (hereafter "Bartholomew"). The Examiner cited U.S. Patent No. 5,365,543, however the descriptions and inventor of the cited number do not match with the '543 and it appears the Bartholomew patent was the intended reference.

Regarding claims 1 and 7, Osborne discloses a radio information system which uses exact mathematical ratios and unique periodic angular coherence of the residual RF carrier and the digitally encoded modulation spectral components of the electromagnetic wave to enhance system performance. According to Osborne, the RF carrier, the data bit message interval, and the PRN code length are all synthesized by numerical frequency multiplication. The PRN modulator is controlled by a PRN synchronizing code generator which performs phase shift keyed modulation of the RF carrier. Osborne fails to disclose the use of a tracking control signal in response to PN phase adjustments for adjusting the system clock.

Nakamura discloses a communications system which generates a spread spectrum signal in accordance with an input signal together with a PN clock signal. The system described in Nakamura uses a generic clock phase shifter which generates a phase shifted clock signal which is modulated in accordance with the input information. The output signal of the divider is sent to a register having two flip flops, and the reference signal of the oscillator is supplied to the other input of the shift register. The system then chooses one of the two outputs of the flip-flops in accordance with the input information. Nakamura fails to disclose the use of a tracking control signal to synchronize the system clock with a received PN signal.

Bartholomew discloses a method of multiple access telephone communication. In accordance with Bartholomew, separate PN generators are used because the

distance from the base unit and resulting propagation delay for each extension unit may differ, which causes the PN phase relationships between the transmitter generator and the receivers be delayed in time. During the initiation of communication, synchronization of each receiver PN generator with that of the extension unit transmitter is required. The seek function is effected by individually retarding the phase of the clock signal input to each uncorrelated receiver PN generator at the line select rate by means of a 90 degree lag circuit and phase multiplexers. The 90 degree lag circuit supplies all four phases of the clock to the phase multiplexers, which select in a retarding order one of the phases by means of a two bit binary counter which is clocked by each line select pulse. The seek mode of operation continuously and progressively retards each receiver PN code phase by 90 degrees until the data demodulator detects correlation of an incoming signal from one of the extension units assigned to a specific line. Osborne fails to disclose a means of reducing jitter and performing synchronization using a tracking control signal. Rather Osborne attempts to synchronize two individual PN signals with varying distances causing lag.

In contrast, the claimed invention generates a reference clock signal and adjusts the phase of the system clock in accordance with the phase adjustments made to a recovered system PN clock signal. The reference clock signal is divided to allow the system clock signal to be adjusted to one of a plurality of system clock

phases. The phase adjustments are utilized by the present system to generate a tracking control signal which is then used to adjust the system clock signal to be equivalent to one of the plurality of system clock phases such that the adjusted system clock is synchronized with the received PN clock signal. The phase adjusted system clock signal is generated in accordance with phase adjustments made to a recovered system PN signal. This permits advancing or retarding the clock of the main clock signal output line according to the phase adjustments of the recovered PN clock, and substantially reduces the jitter of the clock signal of the main clock signal output line. The cited references fail to disclose a tracking control signal which is used to adjust the system clock signal.

Based on the arguments presented above, withdrawal of the rejection of claims 1 and 7 is respectfully requested.

Claim Rejections - 35 USC §103

Claim 6 stands rejected under 35 USC §103(a) as being unpatentable over Bartholomew.

Claims 2, 3, and 6 stand rejected under §103(a) as being unpatentable over Nakamura in view of U.S. Patent No. 6,038,250 to Shou (hereafter "Shou").

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Claims 2, 3, 5 and 6 are dependent upon claims 1 and 7, which the Applicant believes are allowable over the cited prior art of record for the same reasons provided above.

Based on the arguments presented above, withdrawal of the rejection of claims 1-3 and 4-7 is respectfully requested.

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Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1 - 3 and 5 - 9, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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